

REMARKS

This Preliminary Amendment is filed concurrent with an RCE, in response to the final rejection in the Office Action mailed on April 24, 2006, to attempt to find wording acceptable to the Examiner for the rejections based on 35 U.S.C. § 112 and to comply with the suggestion of the Primary Examiner during the personal interview dated March 22, 2006, that the structural details of having two “planar lens arrays” substantially in parallel should easily distinguish from the prior art of record. It is noted, that, although this planar structure of the arrays has been detailed in dependent claims, the evaluation to date has ignored the plain meaning of the claim language.

Moreover, it is noted that the rejection currently of record indicates that the Examiner continues to fail to understand that the imaging plane of the present invention is not defined as an image display surface upon which an image is projected, but rather is the set of points in space that are the focal points of the lenses in the micro lens array.

Claims 18-35 are all of the claims currently pending.

It is noted that Applicants specifically state that no amendment to any claim herein should be construed as a disclaimer of any interest in or right to an equivalent of any element or feature of the amended claim.

The Examiner objects to claims 18, 24, and 25, as further discussed below.

Claims 18-23, 33, and 34 stand rejected under 35 U.S.C. § 112, second paragraph, as allegedly being indefinite and claims 30-35 stand rejected under 35 U.S.C. § 112, second paragraph, as allegedly omitting essential elements.

Claims 25, 26, and 29 stand rejected under 35 U.S.C. § 102(a) as anticipated by U.S. Patent No. 6,462,795 to Clarke. Claims 18-24 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Clarke, further in view of U.S. Patent No. 4,414,565 to Shanks. Claim 27 stands rejected under 35 U.S.C. § 103(a) as unpatentable over Clarke, further in view of US Patent 6,462,794 to Yoshikawa et al. Claim 28 stands rejected under 35 U.S.C. § 103(a) as unpatentable over Clarke, further in view of US Patent 6,714,173 to Shinoura.

These rejections are respectfully traversed in the following discussion.

I. THE CLAIMED INVENTION

As described by, for example, claim 18, the claimed invention is directed to at least one micro lens array assembly, each micro lens array assembly comprising at least one micro convex lens board having two lens array halves mounted substantially parallel to each other, and each said lens array half comprising a transparent flat plate with a plurality of convex lenses arranged in a matrix on each flat surface thereof. The lens array halves are aligned appropriately in the micro lens array to thereby form a lens system for each micro convex lens in each matrix.

For each micro lens array assembly, a display is located relative to the micro lens array assembly to project a two-dimensional image through the micro lens array assembly to be focused in a space on an opposite side thereof as an imaging plane, and each micro lens array assembly displays an erect real image of the two-dimensional image.

A shape of the imaging plane provides an enhanced three-dimensional impression of the two-dimensional image by providing an illusion of depth in the displayed real image, such as to be consistent with a three-dimensional object.

As discussed in the second full paragraph on page 2 of the specification, in the conventional method of enhancing the three-dimensional effect using lenticular lens, special strip-shaped images are required.

The claimed invention, on the other hand, allows a simple (e.g., non-modified) two-dimensional image to be enhanced without special viewer glasses or constructing special versions of the two-dimensional image.

In another aspect, the present invention also can provide the micro lens array having a same magnification. An advantage of this aspect of the present invention is that the created image has always the same size regardless of the distance between the display and the micro lens array.

II. THE CLAIM OBJECTIONS

The Examiner continues to object to claims 18, 24, and 25 as allegedly being technically incorrect in the use of the terminology "create an imaging plane." As mentioned

above, Applicants maintain that the Examiner remains confused by failing to recognize that the present invention is not dependent upon projecting an image onto a display surface, as the Examiner describes in paragraph 1 on page 2 of the Office Action.

Rather, as described in the first full paragraph on page 6 and continuing onto page 7, the “imaging plane 30” shown exemplarily in figure 1 is defined as the combination of focal points of the lenses on the lens array. Accordingly, Applicants submit that, contrary to the Examiner’s allegation that the “... *micro lens array assembly can only create an image, which is then projected onto an existing imaging plane*”, based on this definition of “imaging plane 30” as being the collection of focal points of the lens in the lens array, it is indeed technically correct to describe the lens array as creating the imaging plane.

However, rather than continuing to delay prosecution on a confusion over terminology and concepts, Applicants have amended the claims to eliminate the terminology which the Examiner finds objectionable.

Accordingly, Applicants respectfully requests that the Examiner reconsider and withdraw this objection.

III. THE REJECTION UNDER 35 U.S.C.§112, SECOND PARAGRAPH

Claims 18-23, 33, and 34 stand rejected as indefinite and claims 30-35 stand rejected as omitting essential elements. Applicants believe that the above claim amendments appropriately address the Examiner’s concerns for these claims when, as explained above, there is no image projection surface upon which the present invention relies.

Rather, as explained above, the present invention relies upon the collection of focal points in space on the side of the lens array opposite from the display device.

Therefore, in view of the above discussion and the claim amendments attempting to clarify the method of the present invention, the Examiner is respectfully requested to reconsider and withdraw this rejection of claims 18-23 and 30-35.

IV. THE PRIOR ART REJECTIONS

The Examiner continues to allege that Clarke anticipates claims 25, 26, and 29, when modified by Shanks, renders obvious claims 18-24, when modified by Yoshikawa, renders obvious claim 27, and when modified by Shinoura, renders obvious claim 28.

Applicants again respectfully disagree, since these prior art references clearly teach against the descriptions of the independent claims and are not properly combinable, because of the different teachings in each to achieve their express purpose.

Although Applicants previous arguments are still considered valid and will be presented in an Appeal, Applicants have attempted to expedite prosecution by incorporating structural details into the independent claims that were understood as clearly distinguishing from the prior art, as suggested by the Primary Examiner in the personal interview conducted on March 22, 2006.

It is noted that the rejection currently of record points to the lens array 30 shown in Figure 2 of Clarke as satisfying the description of the array of the present invention. However, it is noted that the plain meaning of even the original claim language was not satisfied, since it is clear from this figure that the center plate is not flat on both sides and does not have a convex micro lens matrix on each flat surface, as would be necessary to satisfy the plain meaning of the original claim language.

The present claim language, therefore, clearly distinguishes from the structure of primary reference Clarke as well as any other prior art reference currently of record.

Hence, turning to the clear language of the claims, in Clarke there is no teaching or suggestion of: "...said micro lens array assembly comprising at least one micro convex lens board having two lens array halves mounted substantially parallel to each other, each said lens array half comprising a transparent flat plate with a plurality of convex lenses arranged in a matrix on each flat surface thereof ...", as required by independent claim 25. The remaining independent claims have similar language.

Therefore, Applicants submit that, since there are elements of the claimed invention that are not taught or suggested by Clarke and Applicants, therefore, respectfully request that the Examiner reconsider and withdraw these rejections based on Clarke.

VI. FORMAL MATTERS AND CONCLUSION

In view of the foregoing, Applicant submits that claims 18-35, all the claims presently pending in the application, are patentably distinct over the prior art of record and are in condition for allowance. The Examiner is respectfully requested to pass the above application to issue at the earliest possible time.

Should the Examiner find the application to be other than in condition for allowance,

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the Examiner is requested to contact the undersigned at the local telephone number listed below to discuss any other changes deemed necessary in a telephonic or personal interview.

The Commissioner is hereby authorized to charge any deficiency in fees or to credit any overpayment in fees to Attorney's Deposit Account No. 50-0481.

Respectfully Submitted,

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